processing the suspension in a rotor-stator mill to produce a product having a final apparent Hercules viscosity and a final Brookfield viscosity,

wherein at least one of said final apparent Hercules viscosity and said final Brookfield viscosity is at least 30% lower than said respective corresponding initial apparent Hercules or Brookfield viscosity.

45. The method of Claim 44, wherein said particulate suspension has a solids content in the range of from about 10% to about 75% by weight.

46. The method of Claim 44, wherein said particulate suspension has a solids content in the range of from about 55% to about 70% by weight.

47. The method of Claim 44, wherein said particulate suspension has a solids content in the range of from about 35% to about 75% by weight.

48. The method of Claim 44, wherein said final apparent Hercules viscosity is at least 30% lower than said initial apparent Hercules viscosity.

49. The method of Claim 44, wherein said final apparent Hercules viscosity is at least 46% lower than said initial apparent Hercules viscosity.

50. The method of Claim 44, wherein said final apparent Hercules viscosity is at least 59% lower than said initial apparent Hercules viscosity.

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51. The method of Claim 44, wherein said final apparent Hercules viscosity is at least 73% lower than said initial apparent Hercules viscosity.

52. The method of Claim 44, wherein said final Brookfield viscosity is at least 30% lower than said initial Brookfield low-shear viscosity.

53. The method of Claim 44, wherein said final Brookfield viscosity is at least 36% lower than said initial Brookfield viscosity.

54. The method of Claim 44, wherein said final Brookfield viscosity is at least 70% lower than said initial Brookfield viscosity.

55. The method of Claim 44, wherein said final Brookfield viscosity is at least 30% lower than said initial Brookfield viscosity and said final apparent Hercules viscosity is at least 46% lower than said initial apparent Hercules viscosity.

56. The method of Claim 44, wherein said final Brookfield viscosity is at least 36% lower than said initial Brookfield viscosity and said final apparent Hercules viscosity is at least 73% lower than said initial apparent Hercules viscosity.

57. The method of Claim 44 wherein the suspension is substantially dispersed in a dispersant and water at an alkaline pH before it is milled in the rotor-stator mill.

58. The method of Claim 57 wherein the suspension is substantially dispersed in sodium polyacrylate, soda ash and water.

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59. The method of Claim 57 wherein the suspension is substantially dispersed at a pH of greater than 6.0, as measured by a in-process pH method.

60. The method of Claim 44 wherein the mill for processing the suspension is a Kady-type mill.

61. The method of Claim 44 wherein the mill for processing the suspension includes a conically shaped stator and a corresponding conically shaped rotor.

62. The method of Claim 44 wherein the mill for processing the suspension includes a stator and correspondingly shaped rotor which defines a gap that is adjustable to provide optimum efficiency as the suspension is processed to produce the product.

63. The method of Claim 44 further comprising the step of beneficiating the suspension or product.

64. The method of Claim 44 further comprising the step of at least partially dewatering the product.

65. The method of Claim 64 wherein said partial dewatering step yields a dewatered product having up to about 75% solids.

66. The method of Claim 64 further comprising the step of re-milling the partially dewatered product.

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67. The method of Claim 64 wherein additional water is removed from the partially dewatered product by the process of spray drying.

68. The method of Claim 44 wherein the particulate comprises a kaolin clay.

69. The method of Claim 44 wherein the particulate comprises a calcined kaolin clay.

70. The method of Claim 44 wherein the particulate comprises calcium carbonate.

71. The method of Claim 44 wherein the particulate comprises precipitated calcium carbonate.

72. The method of Claim 44 wherein the particulate comprises a material chosen from synthetic silica, a synthetic silicate, and an aluminosilicate.

73. The method of Claim 44 wherein the particulate is formed by a direct precipitation process.

74. The method of Claim 44, wherein said particulate comprises a kaolin clay having a Brookfield viscosity of less than 210 cP at 20 RPM and 67% solids.

75. The method of Claim 44, wherein said particulate comprises a hydrous clay having an apparent Hercules viscosity of less than 593 cP at 67% solids.

76. The method of Claim 44, wherein said particulate comprises a delaminated or naturally platy clay having a Brookfield viscosity of less than 305 cP at 20 RPM as measured at 70% solids.

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